DOCUMENT RESUME

ED 273 026 EA 018 760

AUTHOR Sudlow, Robert E.
TITLE Conducting an Effective Schools Program.
INSTITUTION Spencerport Central Schools, N.Y.
PUB DATE May 84
NOTE 23p.; In its: Spencerport Central Schools More Effective Schools/Teaching Project Documents; see EA 018 758. Text may reproduce poorly.
PUB TYPE Guides - Non-Classroom Use (055) -- Information Analyses (070)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Academic Achievement; Academic Standards; Definitions; Elementary Secondary Education; *Evaluation Criteria; Evaluation Methods; *Minimum Competencies; Minimum Competency Testing; *Program Evaluation; *School Effectiveness
IDENTIFIERS Disaggregated Analysis; *Minimum Academic Mastery; New York (Spencerport)

ABSTRACT

Essential to the definition of an effective school is an operational definition of minimum academic mastery as the acquisition of knowledge, skills, and concepts that enable the student to be demonstrably successful in the next grade level in the same school or in any other school in the United States. An effective schools program, such as the one developed in the Spencerport (New York) school system, implements this achievement component and demonstrates the following criteria: (1) at least 95 percent of all students at each grade level demonstrate minimum academic mastery (measured on a standardized achievement test); (2) there is no significant difference in the proportion of students demonstrating minimum academic mastery as a function of socioeconomic class; and (3) the above conditions have been obtained for at least three consecutive years. To determine whether a school is effective, a disaggregated analysis of student achievement in reading and arithmetic must be computed at each grade level. The procedure for computing a disaggregated analysis (derived from a series of inservice workshops with Lawrence Lezotte and Ronald Edmonds) concludes this article. A postscript, describing the Spencerport project, and four footnotes are appended. (IW)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

X This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Robert E. Sudlow

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

ED273026

Spencerport Central Schools
Spencerport, New York

CONDUCTING AN EFFECTIVE SCHOOLS PROGRAM

by

Robert E. Sudlow

May 1984

EA 018 760

CONTENTS

Introduction 1

Essential Characteristics of Effective Schools Programs . . . 3

What Is An Effective School? 9

Computing A Disaggregated Analysis 12

Postscript 18

Footnotes 20

INTRODUCTION

For the past two years the Spencerport Central School District has been studying and working to implement effective schools research findings. Spencerport is a suburban community located near Rochester, New York. There are 3,351 students K - 12 in three elementary schools, one junior high school and one senior high school.

We have been most fortunate in having as consultants Ronald Edmonds, until his untimely death in July 1983, and Lawrence Lezotte. They helped the district Leadership Planning Team develop a Master Plan which was unanimously approved by both the Team and the Board of Education. This year Dr. Lezotte has worked with Building Planning Teams as they strive to implement effective school characteristics in their buildings. All of the buildings are involved in the project.

The thoughts and concepts in this article are being implemented in a school system which is quite different from the inner-city schools in which the research on effective schools occurred. We are examining whether or not the knowledge gained from the original research is applicable to schools with characteristics other than those of the inner-city. To date we

believe that it is. Further, we are ascertaining if this research can be implemented successfully in schools without a massive infusion of money.

As knowledge of Spencerport's efforts slowly spread through Western New York, various individuals discussed effective schools ideas with the author. The opening section of this article is a commentary upon some of these conversations. The second section defines an effective school. It attempts to answer the question: "How do you know an effective school when you see one?" Further, in order to determine if a school is effective, a disaggregated analysis of student achievement must be computed. Consequently the third section of this article discusses how to develop this data.

The definition of an effective school presented in this article, the procedure for computing a disaggregated analysis and other concepts were derived from a series of extensive inservice workshops which Lawrence Lezotte and Ronald Edmonds conducted in the Spencerport Central School District and from reading the literature.

ESSENTIAL CHARACTERISTICS OF EFFECTIVE SCHOOLS PROGRAMS

Which of the following schools is implementing effective schools research findings?

1. Building A strives systematically to improve school climate.
2. Building B conducts inservice programs on the findings of teacher effectivness research.
3. Building C is developing projects to install the six correlates of an effective school.
4. Building D is implementing a new math program characterized by extensive inservice education, collegial problem sharing and discussion, frequent monitoring of student progress, and periodic modification of instructional content and materials based upon pre - post test results.

Answer: <u>None</u> of them are!

Many excellent projects are being implemented in the name of effective schools, but they are not effective schools projects because they do not contain the essential components of an effective school program. They are:

1. Ultimate accountability in terms of student performance

on standardized tests.

2. Accountability in that the proportion of lower class children who demonstrate at least minimal academic mastery is the same as the proportion of middle and upper class children who demonstrate at least minimal academic mastery.

3. Acceptance of the criteria that ninety-five or greater percent of <u>all</u> students, except the mentally retarded, shall demonstrate minimal academic mastery. Should this not occur, then acceptance of the criteria that there shall be annual gains in the percentage of students demonstrating minimal academic mastery until the ninety-five percent criteria is attained.

4. Acceptance of the definition of minimum academic mastery. It is the acquisition of knowledge, skills, and concepts which enable the student to be demonstrably successful in the next grade level either in his or her school or in any other school in the nation.

5. The will to gather, analyze and publicize disaggregated student achievement data which will demonstrate whether or not the school is effective, or is in the process of becoming effective. Disaggregated student achievement

data is a table which shows the percent of students from the lower and the middle and upper socioeconomic classes who score above and below the minimum academic mastery level.

6. Administration of a needs assessment instrument based upon effective schools research literature.
7. Formation of building level planning teams composed of teachers broadly representative of the faculty who have the respect of their peers and of the building principal.
8. Review and approval by the faculty of the proposed action plan prior to its adoption and implementation.
9. Annual analysis of disaggregated student achievement data in light of the criteria of effectiveness and an annual readministration of the needs assessment instrument to determine if the goals of the building plan are being attained.

Should a project not contain all of the above components, it is not a school effectiveness project. A school effectiveness project is one which accepts the definitions used in the research and systematically attempts to implement the research findings.

Research has identified six correlates of an effective school. Effective school researchers have yet to identify which,

if any, correlates are causal or if some correlates are more powerful than others. Hence projects which state, for example, that instructional leadership is the most important correlate and are designed to improve instructional leadership in a building are not school effectiveness projects. If, however, the needs assessment of a building reveals that all of the components of an effective school are in place except instructional leadership and the building's action plan is designed to improve instructional leadership, then the building has a school effectiveness project.

Many educators do not implement the achievement component of an effective schools project. They believe that it is impossible for ninety-five percent of all students to attain minimum academic mastery. This is a policy decision, a value decision because there are schools which meet the rigorous definition of an effective school. Indeed, Edmonds found fifty-five inner city schools in the northeastern United States which met the definition. If <u>one</u> inner city school can attain and maintain this rigorous criterion (let alone fifty-five!) then surely pupil performance is a function of school response to family background rather than a derivative of family background.[1] If effective schools exist in cities, then surely they can exist in rural and suburban communities.

Another reason why educators do not implement the achievement component of an effective schools project is their concern for the affective domain. They believe that since schools strive to attain many important affective goals, reliance upon standardized achievement tests would cause the affective aspects of education either to be ignored or to decline. Fenn and Irvanicki found that "the affective disopsition of students in more effective schools was consistently more positive than that of students in less effective schools."[2] Another perspective is that parents send their children to school to learn. If we as educators fail to meet this minimum expectation, we are remiss. Further, some effective schools researchers state that if there are standardized validated affective tests and, if a building is willing to state that what they measure is the most important educational goal of their building, then these tests should be used in place of standardized criterion referenced or norm referenced achievement tests.

Thus when some educators do not include all of the essential characteristics of an effective schools program in their project they are making value choices.

Hopefully, this discussion of the key characteristics of an effective schools program will serve as a useful tool for those designing or evaluating an effective schools project.

With this background, let us now consider: "What is an effective school?"

WHAT IS AN EFFECTIVE SCHOOL?

An effective school is a building which demonstrates all of the criterion below.

1. Ninety-five, or greater, percent of all students at each grade level demonstrate minimum academic mastery. Students who achieve minimum academic mastery have been prepared so that they will be predictably successful in the next grade in either their own school or in any other school building in the nation. Minimum academic mastery is measured by performance on a standardized achievement test (preferably criterion referenced, otherwise norm referenced).
2. There shall be no significant difference in the proportion of youth demonstrating minimum academic mastery as a function of sociceconomic class.
3. The above two conditions shall have been obtained for a minimum of three consecutive years.

This definition can be illustrated as follows:

	Low Socio-economic Class	Middle and Upper Socio-economic Classes
At or above minimum academic mastery	95%	95%
Below minimum academic mastery	5%	5%

Should a school not be effective according to the above criteria, then the following definition may be used until the building attains effectiveness:

1. There shall be an annual increase in the proportion of students who demonstrate minimum academic mastery, and
2. There shall be an annual decrease in the proportion of youth demonstrating minimum academic mastery as a function of socioeconomic class.

Essential to the definition of an effective school is the above operational definition of minimum academic mastery. Minimum academic mastery is determined by a pupil's performance on a standardized test. Ideally this should be a criterion referenced test which measures the curriculum in the school. In the absence of such a test, a norm referenced achievement test should be used. Before a norm referenced test is selected, it is important that its questions be carefully reviewed to see if they reflect the

school's curriculum. Some schools use the passing - failing standard for required statewide tests (such as the Pupil Evaluation Program tests or the Regents Examinations in New York State). Others use a predetermined point on a norm referenced test such as the twenty-third percentile (third stanine) or below, or the thirty-ninth percentile (fourth stanine) or below. This cutoff point should be established after examining local score distributions and the relationship between a student's performance on a test and his or her subsequent report card grades. (To parents this is a cardinal indicator of their child's academic performance!)

One additional observation needs to be made regarding the criteria that all students will attain at least minimal academic mastery. This does not mean that the effects of social economic class on student academic performance are totally negated. Family background does not limit a pupil's ability to acquire minimal academic skills, but some families can, and do, enhance their childrens achievement well beyond this level.

COMPUTING A DISAGGREGATED ANALYSIS

In order to know whether a school has achieved, or is maintaining, effectiveness, it is necessary to develop a disaggregated analysis of student achievement at each grade level. This analysis should be done for at least reading and arithmetic. Other subjects such as science and social studies may also be included in the disaggregated analysis at the discretion of the staff.

Two pieces of data are needed for each child: his or her test score and his or her socio-economic status. Many school systems routinely collect socio-economic status data as a part of the kindergarten registration process. Usually they record the education of the mother and father. Many schools which have more than fifteen percent of their students on free or reduced price lunches use this data.

For those schools which have socio-economic data on file, determination of socio-economic status is not a problem. All which needs to be done is to develop a frequency distribution of socio-economic indicator scores and to draw a line below which at least fifteen to twenty percent of the population falls. This

procedure applies equally to school buildings in extrmely poor or extremely affluent areas. In the former, the indicator of low socio-economic status may be a mother who has a sixth grade education or less. In the later it may be a mother who has a masters degree or less.

The problem comes for school systems which do not have socio-economic status indicators on file. Edmonds and Fredericksen at Harvard University studied the relationship between twenty-one socio-economic indicators and pupil performance in school. They found that the level of mothers education was the single most powerful variable. Next came the level of the fathers education. A school district, however, may wish to use only U.S. Census data such as owner-occupied housing units or the average number of rooms in the housing unit. But, these are much less powerful indictors than is mother's or father's education.[3]

Many schools use free and reduced lunches as an indicator of a child's socio-economic status. It is on file and is easily accesible to qualified researchers. Free and reduced lunch data, however, is subject to two types of errors: some families which are eligible choose not to apply for free or reduced price lunches. Other families which may have income greater than the federal guidelines permit apply for and receive free or reduced

price school lunches. Thus, this data should be treated with caution, but it is better than no data.

Spencerport did not have socio-economic data on file. Using Edmonds and Fredericksen's research, the district decided to obtain the level of education for both the mother and the father. If a child was living with guardians or foster parents, we obtained the level of education of the adult female and male in the household. If there was no mother in the house, then we used the level of the father's education.

This was done by placing the same educational level question on the Kindergarten registration form, on the new entrant form and on the annual school census form completed by each parent. Parents are asked to indicate the highest grade level completed for both the mother and father. When we collected this data, approximately ten percent of the families either left the question blank or stated that they refused to answer it. Another thirty percent did not return their census forms.

Thus we had a sample of approximately fifty-six percent of the student body. To see if there was any bias or skewedness in the data, a comparison was made with the U.S. Census data for the Town of Ogden in which the Spencerport School District is located. This data revealed that nineteen percent of the population had a

college education. Since twenty-two percent of those responding had a college education, we concluded that we had a representative sample.

Finally, once the data was gathered a frequency distribution was developed in order to determine the cutoff point betwen lower and middle - upper socio-economic classes. A cutoff point of a high school education or less which included 54.4% of the respondents was chosen. If a cutoff point of completion of eleven years of school or less had been chosen, it would have included only 5.5% of the population; we judged this percentage to be too small.

As a result of following a process such as the above, a school will obtain data which appears as follows:

Child No.	Level of Education	SES Status	Total Reading Percentile
1	17	U	98
2	12	L	10
3	19	U	75
4	11	L	43
5	20	U	50
6	14	U	63
7	10	L	45
8	16	U	42
9	9	L	18
10	13	U	55
11	11	L	88
12	13	U	37

This data is next transferred to a preliminary table such as the following:

	High School	Post High School
Minimum Academic Mastery	3	6
40th Percentile		
Below Minimum Mastery	2	1

And then to a final table:

	High School	Post High School
Minimum Academic Mastery	60%	86%
40th Percentile		
Below Minimum Mastery	40%	14%

If a school does a disaggregarted analysis of student achievement according to the criteria and procedures discussed above, then it will have completed a valid disaggregated analysis. The key question, however, is: Does a school want to do this? Does a school have the courage to ascertain whether it provides a better education for one group of children as compared to another? Some administrators and leaders feel that computation and revelation of the results of a disaggregated analysis could be politically damaging, that they could set off a public relations furor. Other administrators and leaders believe that a

disaggregated analaysis of student achievement is an essential first step to program improvement. Without objective analyses such as this, it is impossible to know where the problems are and hence to know what needs to be done to improve the education of all children entrusted to their care. This is a very defensible position to take with boards of education and the public --- but only if subsequent program improvement efforts are implemented and evaluated through annual disaggregated analyses of student achievement.

One final point needs to be made regarding disaggregated analyses of student achievement. It is a very simple, effective tool which can be used to prove or disprove other hypotheses. For example:

1. Does student achievement differ according to gender, race, and/or ethnicity?
2. Do patterns of grading differ according to social class, ethnicity, race and/or gender?
3. Do patterns of course selections (i.e. Which students take which courses?) differ?[4]

Answering questions such as these through computing a disaggregated analysis helps an administrator, a consultant, an evaluator, a teacher better know what is occurring in school.

POSTSCRIPT

During the 1982 - 83 school year the Spencerport Central School District formed a Leadership Planning Team consisting of key teachers from each building, their principal and several district personnel. After participating in an extensive series of workshops conducted by Lawrence Lezotte and Ronald Edmonds the Team developed and unaminously approved a districtwide Master Plan. It was approved by the Superintendent of Schools and unaminously approved by the Board of Education. Ronald Edmonds stated that the Master Plan is "a truly outstanding operational statement of the research and its implications."

Subsequently each building formed its own planning team and developed a plan of action based upon the results of the disaggregatd analysis of student achievement in the building and upon the results of a needs assessment profile of the building. These plans were the major focus of each buildings activities in 1983 - 84. They caused staffs to think and talk about important, key educational issues. This alone is a significant benefit of the project!

At the time this article is being written (May 1984), the buildings are readministering the needs assessment instrument and

achievement testing is occurring. This new data will serve as an evaluation of the first years activities and as a basis for the building planning teams to develop plans for the second year of their long range project.

Should readers desire more information regarding Spencerport's More Effective Schools/Teaching Project they may write to:

Dr. Robert E. Sudlow
Assistant Superintendent for Instruction
Spencerport Central Schools
71 Lyell Avenue
Spencerport, New York 14559

FOOTNOTES

1. Edmonds, Ronald, "Effective Schools for the Urban Poor," Educational Leadership, Oct. 1979, 22 - 23.

2. Fenn, Lawrence M. and Iwanicki, Edward F., "An Investigation of the Relationship Between Student Affective Characteristics and Student Achievement Within More and Less Effective School Settings," Paper Presented at the 1983 Annual Meeting of the American Educational Research Association, 17.

3. Edmonds, Ronald and Fredericksen, John, Identification of Instructionally Effective and Ineffective Schools, Cambridge, Mass.: Harvard University, 1978.

4. Shoemaker, Joan, Research Based School Improvement Practices, Hartford, Conn.: Connecticut State Department of Education, 1984, 23 - 24.